



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,780	12/20/2001	Eyal Cohen	135.001US01	9593
<div>7590 Mark M. Friedman Dr. Mark Friedman Ltd. c/o Polkinghorn 9003 Florin way Upper Marlboro, MD 20772</div>			<div>EXAMINER WILLIAMS, JEFFERY L</div>	
			<div>ART UNIT 2137</div>	<div>PAPER NUMBER</div>
			<div>MAIL DATE 08/22/2007</div>	<div>DELIVERY MODE PAPER</div>

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/027,780

Applicant(s)

COHEN, EYAL

Examiner

Jeffery Williams

Art Unit

2137

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-32 and 34-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-32 and 34-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to the communication filed on 5/30/07.

All objections and rejections not set forth below have been withdrawn.

Claims 18 – 32, 34 – 38 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 18 – 32, 34 – 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aucsmith, “Tamper Resistant Software: An Implementation”, in view of Chaiken et al., “Translation and Transformation of Heterogeneous Programs”, U.S. Patent, 6,802,056.

Regarding claim 18, Aucsmith discloses inserting software procedures within an software executable (Aucsmith, pg. 321, “Integrity Verification Kernel, par. 1; pg. 325, “Integrity Verification Kernel Creation”, par. 1-3). Aucsmith, however, does not appear to disclose specific methods for program instrumentation. Namely, Aucsmith does not

1 appear to disclose *marking a plurality of locations within the executable program file by*
2 *placing a plurality of flags at said locations.*

3 Chaiken discloses methods used to instrument a program. Specifically, Chaiken
4 discloses analyzing an executable and determining the locations for inserting additional
5 software procedures (Chaiken, fig. 2A). The method comprises inserting flags at a
6 plurality of locations to mark where the additional software procedures will be added
7 (fig. 2A:204; 11:27-37; 12:46-67).

8 It would have been obvious to one of ordinary skill in the art to utilize the known
9 methods of instrumenting a program, such as disclosed by Chaiken, within the system
10 of Aucsmith for adding software procedures to an executable. This would have been
11 obvious because one of ordinary skill in the art would have been motivated by the
12 practical need to specifically determine the locations where software procedures can be
13 added to an executable.

14 *The combination enables*

15 *(b) arming the executable program file, thereby producing the secured program*
16 *file by including a plurality of software procedures at said locations wherein each said*
17 *software procedure performs at least one linked portion of the securing (Aucsmith, pg.*
18 *pg. 325, "Integrity Verification Kernel Creation", par. 1-3);*

19 *(c) storing the secured program file in a storage medium operatively attached to*
20 *a computer, wherein executing in a computer said secured program file, said software*
21 *procedures are run solely upon reaching said respective locations (Aucsmith, pg. 328,*
22 *par. 4-6).*

1

2 Regarding claim 19, the combination enables:

3 *wherein the securing includes using a key from at least one of said software*
4 *procedures to decrypt at least one other of said software procedures* (Aucsmith, pg.
5 320, par. 4; pg. 321-322: "...five defenses..."; pg. 322, par. 1-3).

6

7 Regarding claim 20, the combination enables:

8 *wherein said executing includes self-decrypting said modified executable*
9 *program file and secured digital content accessible by said executable program file*
10 (Aucsmith, pg. 320, "...four principles...; pg. 321-322: "...five defenses...").

11

12 Regarding claim 21, the combination enables:

13 *wherein said arming includes storing in at least one of said software procedures*
14 *at least a reference to a key, wherein said key is required for accessing another of said*
15 *software procedures* (Aucsmith, pg. 321-322: "...five defenses...").

16

17 Regarding claim 22, The combination enables:

18 *wherein said designating is performed by an owner of digital content accessible*
19 *by said executable program file* (Aucsmith, pg. pg. 325, "Integrity Verification Kernel
20 Creation").

21

22 Regarding claim 23, The combination enables:

1 (e) *verifying an authentication key accessible over the Internet* (Aucsmith, pg.
2 320, par. 2,3;pg. 327, par. 4; pg. 332, par. 1 – an arrangement of bits, such as a key, is
3 inherently capable of transport by a medium, such as the Internet. The descriptive
4 language, being “accessible” or “able to be accessed”, clearly is applicable to any
5 arrangement of bits, as bits can be transmitted and received over the Internet.
6 Furthermore, describing bits as capable of being transmitted does not further limit
7 structure and require that bits be transmitted).

8
9 Regarding claim 24, the combination enables:

10 (e) *upon said executing, accessing secured digital content stored on a digital*
11 *medium, wherein at least one key required for said accessing is stored on said digital*
12 *medium* (Aucsmith, pg. 321, “Architecture”; pg. 322, #4 – Aucsmith discloses accessing
13 “secured digital content”, upon the execution of the program, the accessing of the
14 content depending upon at least one key).

15
16 Regarding claim 25, the combination enables:

17 *wherein said at least one key is required to decrypt said secured digital content*
18 (Aucsmith, pg. 322, par. 1-3).

19
20 Regarding claim 26, the combination enables:

1 *wherein said at least one key is stored on said storage medium* (Aucsmith, pg.
2 325, par. 6-8 – herein the combination discloses that at least one key accompanies the
3 installed program).

4
5 Regarding claim 27, the combination enables:

6 *wherein said at least one key has at least one address stored solely in at least*
7 *one of said software procedures* (Aucsmith, pg. 321, "Integrity Verification Kernel, #2).

8
9 Regarding claim 28, the combination enables discloses:

10 *wherein said at least one key is provided by an address conversion module*
11 *stored on said digital medium* (Aucsmith, pg. 330, #2; pg. 331, #5, par. 1; pg. 332, par.
12 1).

13
14 Regarding claim 29, the combination enables:

15 *wherein at least one of said software procedures is encrypted using at least one*
16 *key* (Aucsmith, pg. 322, par. 1-3).

17
18 Regarding claim 30, the combination enables:

19 *wherein at least one of said software procedures receives at least a portion of a*
20 *key from at least one other of said software procedures* (Aucsmith, pg. 322, par. 1-3).

21
22 Regarding claim 31, the combination enables:

1 *wherein a key is determined by selectably either a specific location within said*
2 *software procedure or a calculation based on the software procedure, further*
3 *comprising the step of: (d) accessing another said software procedure using said key*
4 (Aucsmith, pg. 322, par. 1-3).

5
6 Regarding claim 32, the combination enables:
7 *wherein said software procedures are concealed within the executable program*
8 *file* (pg. 322, #4; pg. 322, "Technology Extensions").

9
10 Regarding claim 34, the combination enables:
11 wherein portions of said executable program file are occluded by said software
12 procedures (pg. 322, #4; pg. 322, "Technology Extensions").

13
14 Regarding claim 35, the combination enables:
15 *the storage medium which stores the secured program file produced according to*
16 *the method of claim 18* (Aucsmith, pg. 325, par. 6-8).

17
18 Regarding claim 36, the combination enables:
19 *the storage medium storing secured digital content accessible by the secured*
20 *program file produced according to the method of claim 18* (Aucsmith, pg. 325, par. 6-
21 8).

22

Regarding claims 37 and 38, they are rejected, at least, for the same reasons as claim 18.

Response to Arguments

Applicant's arguments with respect to the pending claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


See Notice of References Cited.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

1 A shortened statutory period for reply to this final action is set to expire THREE
2 MONTHS from the mailing date of this action. In the event a first reply is filed within
3 TWO MONTHS of the mailing date of this final action and the advisory action is not
4 mailed until after the end of the THREE-MONTH shortened statutory period, then the
5 shortened statutory period will expire on the date the advisory action is mailed, and any
6 extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of
7 the advisory action. In no event, however, will the statutory period for reply expire later
8 than SIX MONTHS from the date of this final action.

9 Any inquiry concerning this communication or earlier communications from the
10 examiner should be directed to Jeffery Williams whose telephone number is (571) 272-
11 7965. The examiner can normally be reached on 8:30-5:00.

12 If attempts to reach the examiner by telephone are unsuccessful, the examiner's
13 supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone
14 number for the organization where this application or proceeding is assigned is 571-
15 273-8300.


MATTHEW SMITHERS
PRIMARY EXAMINER
Art Unit 2137

Art Unit: 2137

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

J. Williams
AU: 2137

